

Table 4

Persuasive Arguments (Simulation 1)

	Talking Agent					Listening Agent				
	Topic	Feat1	Feat2	Feat3	Feat4	Topic	Feat1	Feat2	Feat3	Feat4
	Prior Learning of Arguments									
#10	1	1	1	1	1					
	Talking and Listening									
#1-3-5-7-9	1	i	i	i	i	?	?	?	?	?
	Test of Beliefs									
of Listener						1	?	?	?	?

Note. Schematic version of learning experiences along Ebbesen & Bowers (1974, Experiment 3). Each row represents a trial (i.e., act) of learning or communicating where cell entries denote external activation and empty cell denote 0 activation; #=number of times the trial is repeated; i=internal activation generated by the talking agent after activating the discussion topic; ? = (little ear) external activation received from the talking agent; in the test phase ? = denotes the activation read off for measuring activation. Trial order was randomized in each phase and condition.

Table 5

Referencing (Simulation 2)

	Talking Agent					Listening Agent				
	Picture	Martini	Glass	Legs	Each-Side	Picture	Martini	Glass	Legs	Each-Side
Prior Observation of Figure by "Director"										
#10	1	1	1	.8	.4					
Talking and Listening										
#12	1	i	i	i	i	?	?	?	?	?
#8	?	?	?	?	?	1	i	i	i	i
Test of Talking										
of "Director"		?	?	?	?					
of "Matcher"						?	?	?	?	

Note. Schematic version of learning experiences along Schober & Clark (1989, Experiment 1). Each row represents a trial of learning or communicating where cell entries denote external activation and empty cell denote 0 activation; #=number of times the trial is repeated; i=internal activation generated by the talking agent after activating the picture; ? = (little ear) external activation received from the talking agent, in the test phase ? = activation of talking agents during the previous talking phase. Trial order was randomized in each phase and condition.

Table 6: Rumor Paradigm (Simulation 3)

	Talking Agent				Listening Agent					
	Jamayans	Smart	Stupid	Honest	Liar	Jamayans	Smart	Stupid	Honest	Liar
Prior SC Information on Jamayans: Per Agent										
#10 smart	1	1								
#10 honest	1			1						
Prior SI Information on Jamayans: Per Agent										
#10 stupid						1	1			
#10 liar						1				1
Mixed (SC + SI) Story to Agent 1										
#5 smart	1	1								
#5 liar	1				1					
Talking and Listening by Agents 1→2, 2→3, 3→4, and 4→5										
#5 intelligence	1	i	i			?	?	?		
#5 honesty	1			i	i	?			?	?
Test of Talking by Each Agent										
smart		?								
stupid			?							
honest				?						
liar					?					

Note. Schematic version of learning experiences along Lyons & Kashima (2003, Experiment 1). Each row represents a trial of learning or communicating where cell entries denote external activation and empty cell denote 0 activation; SC=Stereotype Consistent; SI=Stereotype Inconsistent; #=number of times the trial is repeated; i=internal activation generated by the talking agent after activating the Jamayans; ? = (little ear) external activation received from the talking agent, in the test phase ? = activation of talking agents during

the previous talking phase. The shared condition is always preceded by the SC Information for each agent, and the unshared condition is preceded by the SC or SI Information alternatingly for each agent, both followed by the Mixed Story, and Talking and Listening Phase. Trial order was randomized in each phase and condition.

Table 7

Shared vs. Unique Information (Simulation 5)

	Talking Agent					Listening Agent				
	Patient	Shared1	Shared2	Uni1	Uni2	Patient	Shared1	Shared2	Uni1	Uni2
Learning the Medical Case from Video Tape										
#5	1	1	1	1	0					
#5						1	1	1	0	1
Talking and Listening										
Shared	1	i	i			?	?	?		
	?	?	?			1	i	i		
Unique	1			i	i	?			?	?
	?			?	?	1			i	i
Test of Talking										
		?	?	?	?					
							?	?	?	?

Note. Schematic version of learning experiences along Larson et al. (1996). Each row represents a trial of learning or communicating where cell entries denote external activation and empty cell denote 0 activation; Uni=Unique; #=number of times the trial is repeated; i=internal activation generated by the talking agent after activating the patient; ? = (little ear) external activation received from the talking agent, in the test phase ? = activation of talking agents during the previous talking phase. Trial order was randomized in each phase and condition.

Figure Captions

Figure 1. A multi-agent network model of interpersonal communication. Each agent consists of an auto-associative recurrent network, and the communication between the agents is controlled by trust weights. The straight lines within each network represent intra-individual connection weights linking all units within an individual net, while the arrows between the networks represent inter-individual trust weights (only some of them are shown).

Figure 2. The functional role and adjustment of trust weights in communication between agents, illustrated when a talking agent expresses his or her opinion on the honesty (attribute) of the people of the Jamayans (issue object); if the talker's expressed activation is close vs. different from the listener's internal activation on the same attribute, this may lead to an increase vs. decrease of the trust weight involving that attribute (see text for more details).

Figure 3. Simulation 1: Attitude Shifts in function of the Number of Arguments heard. Human data are denoted by bars, simulated values by broken lines. The human data are from Figure 1 in "Proportion of risky to conservative arguments in a group discussion and choice shift" by E. B. Ebbesen & R. J. Bowers, 1974, *Journal of Personality and Social Psychology*, 29, p. 323. Copyright 1974 by the American Psychological Association.

Figure 4. Interlude Simulation i: Polarization in function of Progress in the Discussion and Amount of Communication. Decreasing polarization as the discussion unfolds is illustrated from left to right panel when communication between majority and minority groups is equal as within the groups [Left], is reduced to half that amount [Middle] or is totally cut off [Right] while keeping the overall communication alike.

Figure 5. Simulation 2: [Top] Referencing. In Krauss, R. M. & Fussell, S. R. (1991). Constructing shared communicative environments. In L. Resnick, J. Levine, S. Teasley (Eds.) *Perspectives on socially shared cognition*, p. 186. Copyright 1991 by the American Psychological Association. [Bottom] Words per Reference by the Director and Matcher. Human data are denoted by bars, simulated values by broken lines. The human data are from Figure 2 in "Understanding by addressees and overhearers" in M. F. Schober & H. H. Clark, 1989, *Cognitive Psychology*, 21, p. 217. Copyright 1989 by Academic Press.

Figure 6. Interlude Simulation ii: Lexical Acquisition for new, matched, synonymous and ambiguous words.

Figure 7. Simulation 3: Proportion of Stereotype-Consistent (SC) and Stereotype Inconsistent (SI) Story Elements in function of the Actual Sharedness. Human data are denoted by bars, simulated values by broken lines. The human data are from Figure 2 (averaged across central and peripheral story elements) in “How are stereotypes maintained through communication? The influence of stereotype sharedness” by A. Lyons & Y. Kashima, 2003, *Journal of Personality and Social Psychology*, 85, p. 995. Copyright 2003 by the American Psychological Association.

Figure 8. Simulation 4: Proportion of Stereotype-Consistent (SC) and Stereotype Inconsistent (SI) Story Elements in function of Perceived Sharedness. Human data are denoted by bars, simulated values by broken lines. The human data are from Figure 1 in “How are stereotypes maintained through communication? The influence of stereotype sharedness” by A. Lyons & Y. Kashima, 2003, *Journal of Personality and Social Psychology*, 85, p. 995. Copyright 2003 by the American Psychological Association.

Figure 9. Simulation 5: Percent Shared Unique Information in function of Discussion Position. Human data are denoted by bars, simulated values by broken lines. The human data are from Figure 1 in "Diagnosing groups: Charting the flow of information in medical decision-making teams" J. R. Larson, Jr., C. Christensen, A. S. Abbott & T. M. Franz, 1996, *Journal of Personality and Social Psychology*, 71, p. 323. Copyright 1996 by the American Psychological Association.

Figure 1

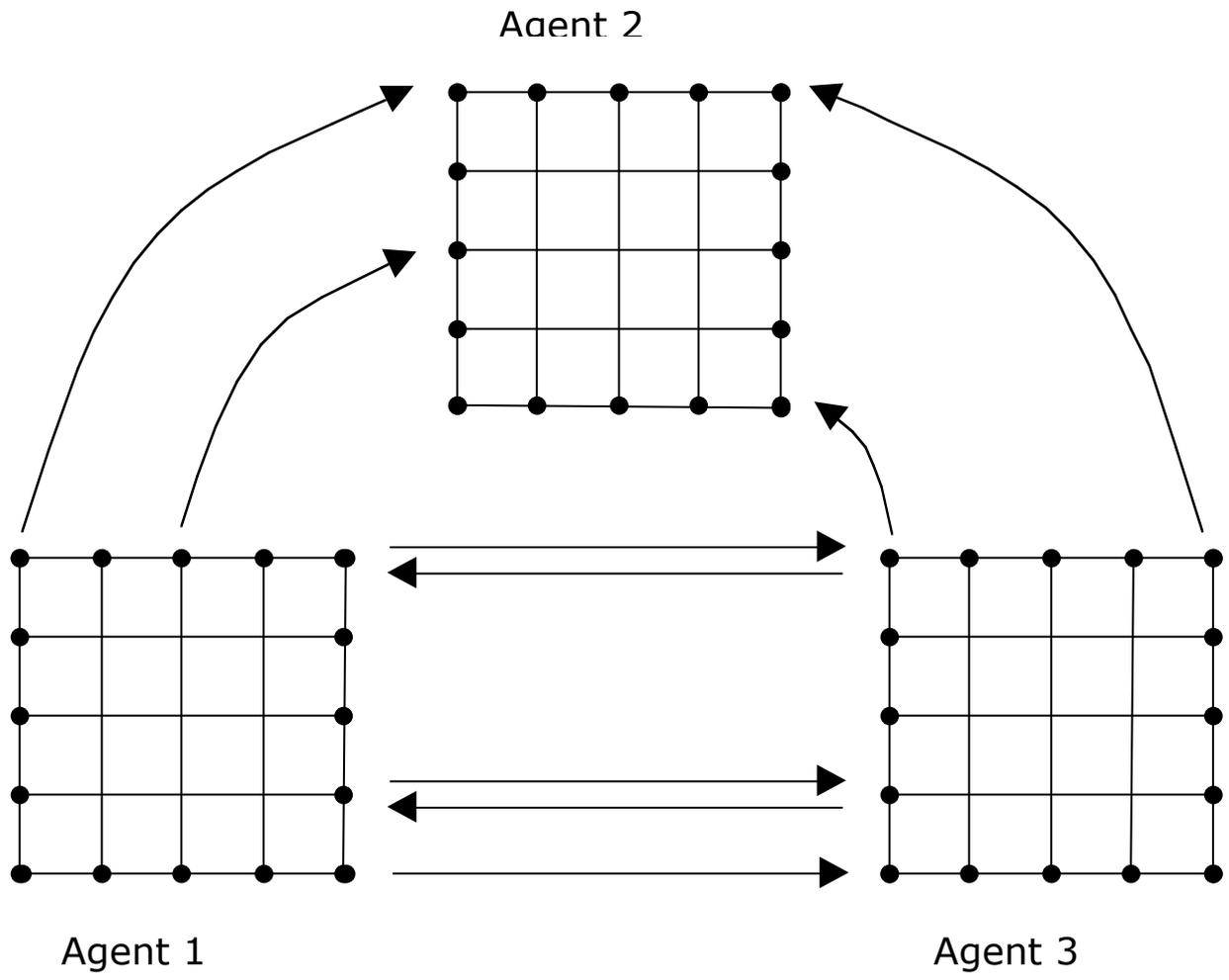
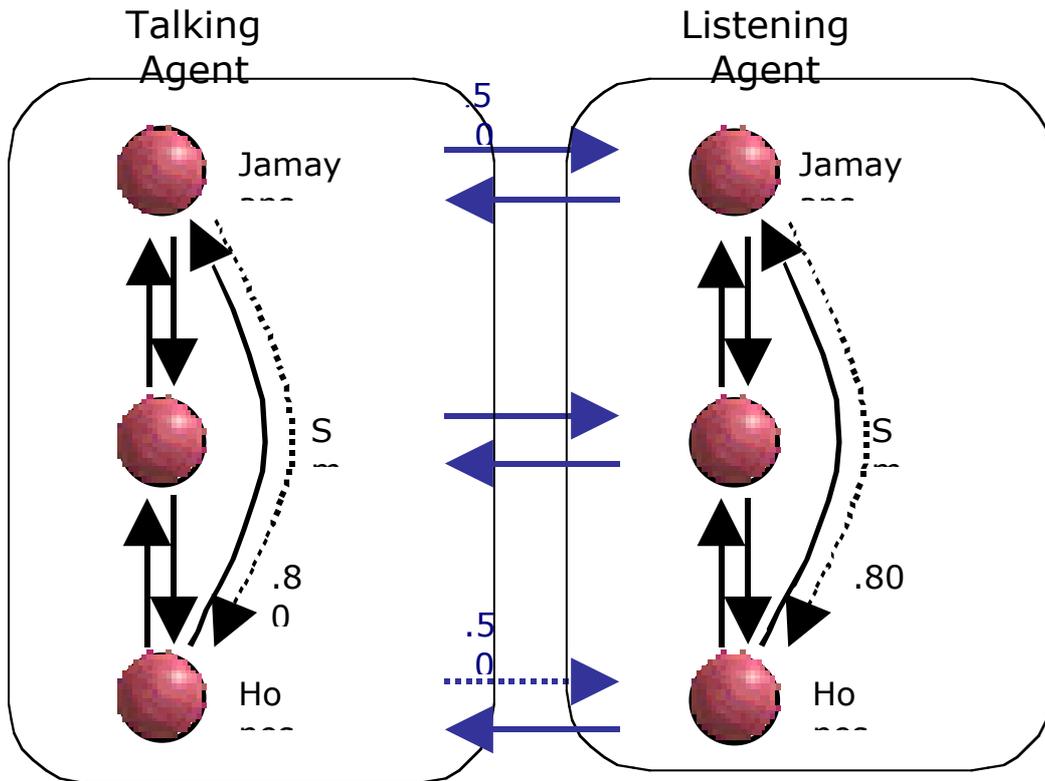


Figure 2



- ➔ *Sending trust weight* $t_{\rightarrow|}$: Regulates how much the information sent by the talker is taken in by
- ➜ *Receiving trust weight* $t_{\leftarrow|}$: Regulates how much the talker expresses the (novel vs. old)
- ➔ *Trust weight* undergoing adjustment by comparing the external activation received from the talker (via talker's Jamayans→Honest internal weight and Honest→Honest trust weight) against the internal activation generated by the listener (via Jamayans→Jamayans trust

Figure 3

